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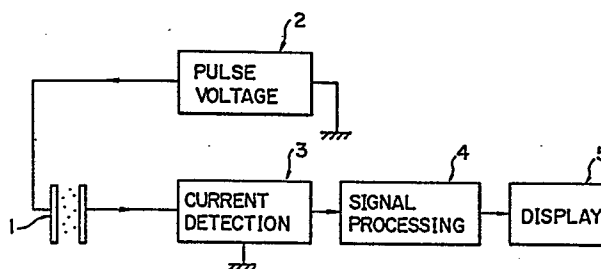
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**Method and apparatus for evaluating the performance of dielectric substances.**

An apparatus for evaluating the performance of a dielectric substance includes: at least a pair of electrodes (1) disposed in contact with the dielectric substance to be measured; a power supply (2) for applying a pulse voltage to the electrodes (1); a current detector (3) for detecting a transient response current flowing between the electrodes dependent on the component of the dielectric substance disposed between the electrodes (1); and a signal processor (4) for evaluating the performance of the dielectric substance. The performance evaluation may be performed based on at least one of a peak value of the transient response current at a certain period of time, a difference between the peak value and a value at a fixed period of time after the peak value, and a ratio of the peak value to the difference between the two values. With this method and apparatus, the performance of the dielectric substance can quantitatively be evaluated.





| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                     |                                                                               |                                                                                                                                                                                                                                                                              | EP 84102243.7                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Category                                                                                                                                                                                                                | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim                                                                                                                                                                                                                                                            | CLASSIFICATION OF THE APPLICATION (Int. Cl. 3) |
| A                                                                                                                                                                                                                       | <u>DE - A - 2 126 709</u> (IMPERIAL CHEMICAL)<br>* Claims; fig. 5 *<br>--     | 1                                                                                                                                                                                                                                                                            | G 01 N 33/28                                   |
| A                                                                                                                                                                                                                       | <u>GB - A - 1 034 861</u> (TOYOO YAMADA)<br>* Claims 1-7; fig. 1-5 *<br>--    | 1                                                                                                                                                                                                                                                                            |                                                |
| A                                                                                                                                                                                                                       | <u>GB - A - 1 292 332</u> (IMPERIAL CHEMICAL)<br>* Claims; fig. 1-8 *<br>--   | 1                                                                                                                                                                                                                                                                            |                                                |
| A                                                                                                                                                                                                                       | <u>GB - A - 1 418 918</u> (REGIE NATIONALE)<br>* Totality *<br>--             | 1                                                                                                                                                                                                                                                                            |                                                |
| A                                                                                                                                                                                                                       | <u>US - A - 3 067 385</u> (RYKOSKEY)<br>* Totality *<br>--                    | 1                                                                                                                                                                                                                                                                            |                                                |
| A                                                                                                                                                                                                                       | <u>US - A - 4 007 629</u> (A.HOCHSTEIN)<br>* Abstract *<br>----               | 1                                                                                                                                                                                                                                                                            |                                                |
| The present search report has been drawn up for all claims                                                                                                                                                              |                                                                               |                                                                                                                                                                                                                                                                              |                                                |
| Place of search<br>VIENNA                                                                                                                                                                                               |                                                                               | Date of completion of the search<br>21-11-1984                                                                                                                                                                                                                               | Examiner<br>ERBER                              |
| <b>CATEGORY OF CITED DOCUMENTS</b>                                                                                                                                                                                      |                                                                               |                                                                                                                                                                                                                                                                              |                                                |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                               | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                                |